FOS Molecular Data Science - Timetable

Week 1: October 19th - 23rd

Mon	10-19 Introduction to FOS		
09:15 - 11:30	*Lecture* Introduction to Molecular Epidemiology	P.E. Slagboom B.T. Heijmans	**V4-50**
11:30 - 12:30	*Lecture* Analysis using Large-scale Data Sets		
	10-19 Introduction to R		
13:15 - 14:15	*Lecture* Introduction to R	L. Sinke	
14:15 - 17:00	*Practical* Introduction to R - I: Basics		
Tue			
09:15 - 12:30	*Practical* Introduction to R - II: Advanced	L. Sinke	**V4-50**
13:15 - 17:00	*Practical* Introduction to R - III: Bioconductor		
Wed	10-21 GWAS		
09:15 - 10:00	*Lecture* Introduction to Genome-wide Analysis	M. Beekman	**V4-50**
10:00 - 12:30	*Practical* Genome-wide Association		
13:15 - 17:00	*Practical* Genome-wide Association		
Thu			
09:15 - 12:30	*Practical* Genome-wide Association	M. Beekman	**V4-62**
	10-22 RNA Sequencing		
13:15 - 14:00	*Lecture* Introduction to Transcriptomics	R. Coutinho de Almeida	
14:00 - 17:00	*Practical* Analysis of Expression Data		
Friday			
09:15 - 10:30	*Practical* Analysis of Expression Data	R. Coutinho de Almeida	**V4-52** **V4-56**
	10-23 Finding Genes in Practice		
10:30 - 11:15	*Lecture* Finding Functionally Relevant Genes	Y. Ramos	
11:15 - 12:30	*Practical* Finding Genes in Practice		
13:15 - 17:00	*Practical* Finding Genes in Practice		

Week 2: October 26th - 30th

Mon	Kaltura		
09:00 - 10:30	*Self Study* Freedman et al. (2001)	I. Meulenbelt	**-**
10:30 - 11:30	*Discussion* Freedman et al. (2001)		
11:30 - 12:30	*Lecture* Functional Genomics		
	10-26 Epigenetics		
13:15 - 14:00	*Lecture* Introduction to the Epigenome	B.T. Heijmans	**V2-34**
14:00 - 17:00	*Practical* Epigenomics	R. Slieker	

Tue			
09:15 - 12:30	*Practical* Epigenomics	R.Slieker	**V4-50**
13:15 - 14:00	*Practical* Epigenomics		
14:00 - 15:00	*Lecture* Epigenetics and Prenatal Famine Exposure	B.T. Heijmans	
15:00 - 17:00	*Interim Evaluation of Participation and Interaction*		
Wed	Kaltura		
09:00 - 09:45	*Lecture* Metabolomics as Biomarkers	P.E. Slagboom	**-**
09:45 - 12:30	*Discussion* Marioni et al. (2016)		
	10-28 Metabolomics		
13:15 - 14:00	*Lecture* Introduction to Metabolomics	M. Beekman	**V4-50**
14:00 - 17:00	*Practical* Metabolomics Data Analysis	E. van den Akker	
Thu	10-29 Clustering		
09:15 - 10:00	*Lecture* Clustering	M. Reinders	**V3-18** **V3-22**
10:00 - 12:30	*Practical* Clustering		
	10-29 Public Databases		
13:15 - 14:00	*Lecture* Exploiting Public Data	B.T. Heijmans	
14:00 - 17:00	*Practical* Using Online Databases		
Fri	Kaltura		
09:00 - 10:00	*Lecture* NGS Technology	Y. Ariyurek	**-**
10:00 - 11:15	*Lab Tour* NGS Technology		
11:15 - 12:30	*Lecture* Exome Sequencing	I. Meulenbelt	
	10-30 Exome Sequencing	Y. Ramos	**V4-50**
13:15 - 17:00	*Practical* Exome Sequencing		

Week 3: November 2nd - 6th

Mon	11-02 Single Cell Sequencing		
09:15 - 10:00	*Lecture* Single Cell Sequencing	A. Mahfouz	**V4-50**
10:00 - 12:30	*Practical* Single Cell Sequencing - I		
13:15 - 15:00	*Practical* Single Cell Sequencing - II	I. Khatri	
15:00 - 17:00	*Practical* Single Cell Sequencing - III		
Tue	11-03 MR and Integrative Omics		
09:15 - 10:30	*Lecture* Integrative Analysis and MR	B.T. Heijmans	**V4-18** **V4-22**
10:00 - 12:30	*Practical* Integrative Analysis and MR		
	Kaltura		
13:15 - 14:00	*Lecture* Animal Models of Ageing	V. Raz	**-**
14:00 - 15:30	*Self Study* Animal Models of Ageing		
15:30 - 17:00	*Discussion* Animal Models of Ageing		

Wed 11-04 Project

09:15 - 11:00	*Lecture* Where Does Research Start?	P.E. Slagboom B.T. Heijmans I. Meulenbelt	V4-50
11:00 - 12:30	*Project* Formulation of Hypothesis		
13:15 - 17:00	*Project* Formulation of Hypothesis & Objectives		

Thu

09:00 - 11:30	*Project* Proposal		V4-56 V4-68 V2-44 V4-30
11:30 - 12:30	*Lecture* Directed Acyclic Graphs	B.T. Heijmans	
13:15 - 17:00	*Project* Pilot Data		

Fri

09:00 - 12:30	*Project* Pilot Data		V4-50
13:15 - 17:00	*Project* Pilot Data		

Week 4: November 9th - 13th

Mon

09:15 - 12:30	*Project* Pilot Data		V3-36
13:15 - 17:00	*Project*		

Tue

09:15 - 12:30	*Project* Project Synopsis		V4-26 V4-30
13:15 - 17:00	*Project* Project Synopsis		

Wed

09:15 - 12:30	*Project* Prepare Presentation		V4-62
13:15 - 17:00	*Project* Prepare Presentation		

Thu

09:15 - 10:00	*Project*	P.E. Slagboom B.T. Heijmans I. Meulenbelt	V4-50
10:00 - 12:30	*Project* Presentations & Defence		
13:15 - 16:00	*Project* Presentations & Defence		
16:00 - 17:00	*Looking Back on the Course*		

Fri

09:15 - 12:30	*Project* Peer Discussions		V4-30 V4-46 V3-36 V3-50
10:00 - 12:30	*Project* Presentations & Defence		
13:15 - 15:00	*Reflective Assignment*	I. Meulenbelt B.T. Heijmans	V4-62